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FILE 'HOME' ENTERED AT 10:49:13 ON 20 NOV 2006

=> file medline, biosis, wpids, dgene  
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FULL ESTIMATED COST

FILE 'MEDLINE' ENTERED AT 10:49:38 ON 20 NOV 2006

FILE 'BIOSIS' ENTERED AT 10:49:38 ON 20 NOV 2006  
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=> s triacylglycerol and production  
L1 2485 TRIACYLGLYCEROL AND PRODUCTION

=> s triacylglycerol production  
L2 96 TRIACYLGLYCEROL PRODUCTION

=> s l1 and l2  
L3 96 L1 AND L2

=> s l3 and (enzyme)  
L4 45 L3 AND (ENZYME)

=> s l4 and (acyl-CoA-independent reaction)  
L5 34 L4 AND (ACYL-COA-INDEPENDENT REACTION)

=> d l5 ti abs ibib 1-15

L5 ANSWER 1 OF 34 WPIDS COPYRIGHT 2006 THE THOMSON CORP on STN

TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content

AN 2000-665012 [64] WPIDS

AB WO 2000060095 A2 UPAB: 20050831

NOVELTY - An enzyme catalyzing (in an acyl-CoA-independent reaction) the transfer of fatty acids from phospholipids to diacylglycerol in the biosynthetic pathway for the production of triacylglycerol, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) a nucleotide sequence encoding the enzyme, or a partial nucleotide sequence corresponding to the full length nucleotide sequence that encodes the enzyme;
- (2) a gene construct comprising the nucleotide sequence operably linked to a heterologous nucleic acid;
- (3) a vector comprising the nucleotide sequence or the gene construct;
- (4) a transgenic cell or organism containing the nucleotide sequence and/or the gene construct and/or the vector;
- (5) a process for producing triacylglycerol comprising growing the transgenic cell organism under conditions where the nucleotide sequence is expressed; and
- (6) triacylglycerol produced by the process of (5).

USE - The enzyme and the nucleotides encoding them are useful for producing triacylglycerol and/or triacylglycerol with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism.

ACCESSION NUMBER: 2000-665012 [64] WPIDS  
 DOC. NO. CPI: C2000-201465 [64]  
 TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content  
 DERWENT CLASS: C06; D16; D23; E17; P13; P14  
 INVENTOR: BANAS A; DAHLQVIST A; LEDMAN M; LENMAN M; RONNE H; STAHL U; STYMNE S  
 PATENT ASSIGNEE: (BADI-C) BASF PLANT SCI GMBH  
 COUNTRY COUNT: 89

PATENT INFO ABBR.:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2000060095	A2	20001012	(200064)*	EN	97[6]	
AU 2000038147	A	20001023	(200107)	EN		
NO 2001004716	A	20011128	(200208)	NO		
EP 1165803	A2	20020102	(200209)	EN		
CZ 2001003529	A3	20020213	(200221)	CS		
BR 2000009510	A	20020423	(200235)	PT		
KR 2001112396	A	20011220	(200239)	KO		
SK 2001001387	A3	20020604	(200247)	SK		
HU 2002000480	A2	20020729	(200258)	HU		
JP 2002541783	W	20021210	(200301)	JA	90	
CN 1362994	A	20020807	(200304)	ZH		
NZ 514227	A	20031219	(200404)	EN		
MX 2001009577	A1	20030701	(200420)	ES		
AU 777031	B2	20040930	(200480)	EN		
RU 2272073	C2	20060320	(200620)	RU		
CN 1230541	C	20051207	(200654)	ZH		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000060095	A2	WO 2000-EP2701	20000328
AU 2000038147	A	AU 2000-38147	20000328
AU 777031	B2	AU 2000-38147	20000328
BR 2000009510	A	BR 2000-9510	20000328
CN 1362994	A	CN 2000-805998	20000328
EP 1165803	A2	EP 2000-917001	20000328
JP 2002541783	W	JP 2000-609586	20000328
NZ 514227	A	NZ 2000-514227	20000328
NO 2001004716	A	WO 2000-EP2701	20000328
EP 1165803	A2	WO 2000-EP2701	20000328
CZ 2001003529	A3	WO 2000-EP2701	20000328
BR 2000009510	A	WO 2000-EP2701	20000328
SK 2001001387	A3	WO 2000-EP2701	20000328
HU 2002000480	A2	WO 2000-EP2701	20000328
JP 2002541783	W	WO 2000-EP2701	20000328
NZ 514227	A	WO 2000-EP2701	20000328
MX 2001009577	A1	WO 2000-EP2701	20000328
RU 2272073	C2	WO 2000-EP2701	20000328
CZ 2001003529	A3	CZ 2001-3529	20000328

RU 2272073 C2  
SK 2001001387 A3  
MX 2001009577 A1  
NO 2001004716 A  
KR 2001112396 A  
HU 2002000480 A2  
CN 1230541 C

RU 2001-129499 20000328  
SK 2001-1387 20000328  
MX 2001-9577 20010924  
NO 2001-4716 20010928  
KR 2001-712623 20010929  
HU 2002-480 20000328  
CN 2000-805998 20000328

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 777031	B2	Previous Publ	AU 2000038147 A
AU 2000038147	A	Based on	WO 2000060095 A
EP 1165803	A2	Based on	WO 2000060095 A
CZ 2001003529	A3	Based on	WO 2000060095 A
BR 2000009510	A	Based on	WO 2000060095 A
SK 2001001387	A3	Based on	WO 2000060095 A
HU 2002000480	A2	Based on	WO 2000060095 A
JP 2002541783	W	Based on	WO 2000060095 A
NZ 514227	A	Based on	WO 2000060095 A
MX 2001009577	A1	Based on	WO 2000060095 A
AU 777031	B2	Based on	WO 2000060095 A
RU 2272073	C2	Based on	WO 2000060095 A

PRIORITY APPLN. INFO: US 2000-180687P 20000207  
EP 1999-106656 19990401  
EP 1999-111321 19990610

L5 ANSWER 2 OF 34 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic  
pathway for triacylglycerol production and DNAs  
encoding them, useful for producing triacylglycerol, or for  
transforming any cell or organism to increase oil content -  
AN AAB24267 Protein DGENE  
AB The present invention describes an enzyme for catalysing (in an  
acyl-CoA-independent reaction) the  
transfer of fatty acids from phospholipids to diacylglycerol in the  
biosynthetic pathway for the production of  
triacylglycerol (TAG). The enzyme is designated as  
phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme  
and the nucleotides encoding them are useful for producing TAG and/or TAG  
with uncommon fatty acids. The enzyme and the nucleotide are  
also useful for transforming any cell or organism in order to be  
expressed in this cell or organism and result in an altered, preferably  
increased oil content of this cell or organism. The present sequence  
represents the Zea mays PDAT amino acid sequence.

ACCESSION NUMBER: AAB24267 Protein DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the  
biosynthetic pathway for triacylglycerol  
production and DNAs encoding them, useful for  
producing triacylglycerol, or for transforming any  
cell or organism to increase oil content -  
INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI) BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]

CROSS REFERENCES: N-PSDB: AAC64445

DESCRIPTION: Zea mays PDAT amino acid sequence SEQ ID NO:7b.

L5 ANSWER 3 OF 34 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic  
pathway for triacylglycerol production and DNAs  
encoding them, useful for producing triacylglycerol, or for  
transforming any cell or organism to increase oil content -  
AN AAB24266 Protein DGENE  
AB The present invention describes an enzyme for catalysing (in an  
acyl-CoA-independent reaction) the  
transfer of fatty acids from phospholipids to diacylglycerol in the  
biosynthetic pathway for the production of  
triacylglycerol (TAG). The enzyme is designated as  
phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme  
and the nucleotides encoding them are useful for producing TAG and/or TAG  
with uncommon fatty acids. The enzyme and the nucleotide are  
also useful for transforming any cell or organism in order to be  
expressed in this cell or organism and result in an altered, preferably  
increased oil content of this cell or organism. The present sequence  
represents the yeast (*Saccharomyces cerevisiae*) PDAT amino acid sequence.

ACCESSION NUMBER: AAB24266 Protein DGENE

TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the  
biosynthetic pathway for triacylglycerol  
production and DNAs encoding them, useful for  
producing triacylglycerol, or for transforming any  
cell or organism to increase oil content -

INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S

PATENT ASSIGNEE: (BADI) BASF PLANT SCI GMBH.

PATENT INFO: WO 2000060095 A2 20001012 97

APPLICATION INFO: WO 2000-EP2701 20000328

PRIORITY INFO: EP 1999-106656 19990401

EP 1999-111321 19990610

US 2000-180687 20000207

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 2000-665012 [64]

CROSS REFERENCES: N-PSDB: AAC64441

DESCRIPTION: *Saccharomyces cerevisiae* PDAT amino acid sequence SEQ ID  
NO:2b.

L5 ANSWER 4 OF 34 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic  
pathway for triacylglycerol production and DNAs  
encoding them, useful for producing triacylglycerol, or for  
transforming any cell or organism to increase oil content -  
AN AAB24265 Protein DGENE  
AB The present invention describes an enzyme for catalysing (in an  
acyl-CoA-independent reaction) the  
transfer of fatty acids from phospholipids to diacylglycerol in the  
biosynthetic pathway for the production of  
triacylglycerol (TAG). The enzyme is designated as  
phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme  
and the nucleotides encoding them are useful for producing TAG and/or TAG  
with uncommon fatty acids. The enzyme and the nucleotide are  
also useful for transforming any cell or organism in order to be  
expressed in this cell or organism and result in an altered, preferably  
increased oil content of this cell or organism. The present sequence  
represents the yeast (*Saccharomyces cerevisiae*) PDAT ORF (open reading  
frame) amino acid sequence.

ACCESSION NUMBER: AAB24265 Protein DGENE

TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the  
biosynthetic pathway for triacylglycerol

production and DNAs encoding them, useful for  
producing triacylglycerol, or for transforming any  
cell or organism to increase oil content -

INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI)BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207

DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
CROSS REFERENCES: N-PSDB: AAC64440  
DESCRIPTION: Saccharomyces cerevisiae PDAT ORF amino acid sequence SEQ ID  
NO:5a.

L5 ANSWER 5 OF 34 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic  
pathway for triacylglycerol production and DNAs  
encoding them, useful for producing triacylglycerol, or for  
transforming any cell or organism to increase oil content -

AN AAB24264 Protein DGENE  
AB The present invention describes an enzyme for catalysing (in an  
acyl-CoA-independent reaction) the  
transfer of fatty acids from phospholipids to diacylglycerol in the  
biosynthetic pathway for the production of  
triacylglycerol (TAG). The enzyme is designated as  
phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme  
and the nucleotides encoding them are useful for producing TAG and/or TAG  
with uncommon fatty acids. The enzyme and the nucleotide are  
also useful for transforming any cell or organism in order to be  
expressed in this cell or organism and result in an altered, preferably  
increased oil content of this cell or organism. The present sequence  
represents an Arabidopsis thaliana PDAT amino acid sequence.

ACCESSION NUMBER: AAB24264 Protein DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the  
biosynthetic pathway for triacylglycerol  
production and DNAs encoding them, useful for  
producing triacylglycerol, or for transforming any  
cell or organism to increase oil content -

INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI)BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207

DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
DESCRIPTION: Arabidopsis thaliana PDAT amino acid sequence SEQ ID NO:3a.

L5 ANSWER 6 OF 34 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic  
pathway for triacylglycerol production and DNAs  
encoding them, useful for producing triacylglycerol, or for  
transforming any cell or organism to increase oil content -

AN AAB24263 Protein DGENE  
AB The present invention describes an enzyme for catalysing (in an  
acyl-CoA-independent reaction) the  
transfer of fatty acids from phospholipids to diacylglycerol in the  
biosynthetic pathway for the production of

triacylglycerol (TAG). The enzyme is designated as phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme and the nucleotides encoding them are useful for producing TAG and/or TAG with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism. The present sequence represents an Arabidopsis thaliana PDAT amino acid sequence.

ACCESSION NUMBER: AAB24263 Protein DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI)BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
DESCRIPTION: Arabidopsis thaliana PDAT amino acid sequence SEQ ID NO:2a.

L5 ANSWER 7 OF 34 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
AN AAB24262 Protein DGENE  
AB The present invention describes an enzyme for catalysing (in an acyl-CoA-independent reaction) the transfer of fatty acids from phospholipids to diacylglycerol in the biosynthetic pathway for the production of triacylglycerol (TAG). The enzyme is designated as phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme and the nucleotides encoding them are useful for producing TAG and/or TAG with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism. The present sequence represents the yeast (*Saccharomyces cerevisiae*) PDAT ORF (open reading frame) amino acid sequence.

ACCESSION NUMBER: AAB24262 Protein DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI)BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
DESCRIPTION: *Saccharomyces cerevisiae* PDAT ORF amino acid sequence SEQ ID NO:1a.

L5 ANSWER 8 OF 34 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
 TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
 AN AAB24261 Protein DGENE  
 AB The present invention describes an enzyme for catalysing (in an acyl-CoA-independent reaction) the transfer of fatty acids from phospholipids to diacylglycerol in the biosynthetic pathway for the production of triacylglycerol (TAG). The enzyme is designated as phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme and the nucleotides encoding them are useful for producing TAG and/or TAG with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism. The present sequence represents an Arabidopsis thaliana PDAT amino acid sequence.

ACCESSION NUMBER: AAB24261 Protein DGENE  
 TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
 INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
 PATENT ASSIGNEE: (BADI)BASF PLANT SCI GMBH.  
 PATENT INFO: WO 2000060095 A2 20001012 97  
 APPLICATION INFO: WO 2000-EP2701 20000328  
 PRIORITY INFO: EP 1999-106656 19990401  
 EP 1999-111321 19990610  
 US 2000-180687 20000207  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 OTHER SOURCE: 2000-665012 [64]  
 DESCRIPTION: Arabidopsis thaliana PDAT amino acid sequence SEQ ID NO:15.

L5 ANSWER 9 OF 34 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
 TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
 AN AAB24260 Protein DGENE  
 AB The present invention describes an enzyme for catalysing (in an acyl-CoA-independent reaction) the transfer of fatty acids from phospholipids to diacylglycerol in the biosynthetic pathway for the production of triacylglycerol (TAG). The enzyme is designated as phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme and the nucleotides encoding them are useful for producing TAG and/or TAG with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism. The present sequence represents an Arabidopsis thaliana PDAT amino acid sequence.

ACCESSION NUMBER: AAB24260 Protein DGENE  
 TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
 INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
 PATENT ASSIGNEE: (BADI)BASF PLANT SCI GMBH.



PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
DESCRIPTION: Arabidopsis thaliana PDAT amino acid sequence SEQ ID NO:14.

L5 ANSWER 10 OF 34 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic  
pathway for triacylglycerol production and DNAs  
encoding them, useful for producing triacylglycerol, or for  
transforming any cell or organism to increase oil content -  
AN AAB24259 Protein DGENE  
AB The present invention describes an enzyme for catalysing (in an  
acyl-CoA-independent reaction) the  
transfer of fatty acids from phospholipids to diacylglycerol in the  
biosynthetic pathway for the production of  
triacylglycerol (TAG). The enzyme is designated as  
phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme  
and the nucleotides encoding them are useful for producing TAG and/or TAG  
with uncommon fatty acids. The enzyme and the nucleotide are  
also useful for transforming any cell or organism in order to be  
expressed in this cell or organism and result in an altered, preferably  
increased oil content of this cell or organism. The present sequence  
represents the Schizosaccharomyces pombe PDAT amino acid sequence.

ACCESSION NUMBER: AAB24259 Protein DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the  
biosynthetic pathway for triacylglycerol  
production and DNAs encoding them, useful for  
producing triacylglycerol, or for transforming any  
cell or organism to increase oil content -

INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S

PATENT ASSIGNEE: (BADI)BASF PLANT SCI GMBH.

PATENT INFO: WO 2000060095 A2 20001012 97

APPLICATION INFO: WO 2000-EP2701 20000328

PRIORITY INFO: EP 1999-106656 19990401

EP 1999-111321 19990610

US 2000-180687 20000207

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 2000-665012 [64]

DESCRIPTION: Schizosaccharomyces pombe PDAT amino acid sequence SEQ ID  
NO:13.

L5 ANSWER 11 OF 34 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic  
pathway for triacylglycerol production and DNAs  
encoding them, useful for producing triacylglycerol, or for  
transforming any cell or organism to increase oil content -  
AN AAB24258 Protein DGENE  
AB The present invention describes an enzyme for catalysing (in an  
acyl-CoA-independent reaction) the  
transfer of fatty acids from phospholipids to diacylglycerol in the  
biosynthetic pathway for the production of  
triacylglycerol (TAG). The enzyme is designated as  
phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme  
and the nucleotides encoding them are useful for producing TAG and/or TAG  
with uncommon fatty acids. The enzyme and the nucleotide are  
also useful for transforming any cell or organism in order to be  
expressed in this cell or organism and result in an altered, preferably

increased oil content of this cell or organism. The present sequence represents the Zea mays PDAT protein.

ACCESSION NUMBER: AAB24258 Protein DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI)BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
CROSS REFERENCES: N-PSDB: AAC64435  
DESCRIPTION: Zea mays EST PDAT protein sequence SEQ ID NO:8.

L5 ANSWER 12 OF 34 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
AN AAB24257 Protein DGENE  
AB The present invention describes an enzyme for catalysing (in an acyl-CoA-independent reaction) the transfer of fatty acids from phospholipids to diacylglycerol in the biosynthetic pathway for the production of triacylglycerol (TAG). The enzyme is designated as phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme and the nucleotides encoding them are useful for producing TAG and/or TAG with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism. The present sequence represents the Arabidopsis thaliana PDAT protein.

ACCESSION NUMBER: AAB24257 Protein DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI)BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
CROSS REFERENCES: N-PSDB: AAC64434  
DESCRIPTION: Arabidopsis thaliana PDAT protein SEQ ID NO:6.

L5 ANSWER 13 OF 34 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -

AN AAB24256 Protein DGENE  
AB The present invention describes an enzyme for catalysing (in an acyl-CoA-independent reaction) the transfer of fatty acids from phospholipids to diacylglycerol in the biosynthetic pathway for the production of triacylglycerol (TAG). The enzyme is designated as phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme and the nucleotides encoding them are useful for producing TAG and/or TAG with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism. The present sequence represents the yeast (*Saccharomyces cerevisiae*) PDAT protein.

ACCESSION NUMBER: AAB24256 Protein DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI)BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
CROSS REFERENCES: N-PSDB: AAC64431  
DESCRIPTION: *Saccharomyces cerevisiae* PDAT protein sequence SEQ ID NO:2.

L5 ANSWER 14 OF 34 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -

AN AAC64451 DNA DGENE  
AB The present invention describes an enzyme for catalysing (in an acyl-CoA-independent reaction) the transfer of fatty acids from phospholipids to diacylglycerol in the biosynthetic pathway for the production of triacylglycerol (TAG). The enzyme is designated as phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme and the nucleotides encoding them are useful for producing TAG and/or TAG with uncommon fatty acids. The enzyme and the nucleotide are also useful for transforming any cell or organism in order to be expressed in this cell or organism and result in an altered, preferably increased oil content of this cell or organism. The present sequence represents a PCR primer for yeast (*Saccharomyces cerevisiae*) PDAT.

ACCESSION NUMBER: AAC64451 DNA DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic pathway for triacylglycerol production and DNAs encoding them, useful for producing triacylglycerol, or for transforming any cell or organism to increase oil content -  
INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S  
PATENT ASSIGNEE: (BADI)BASF PLANT SCI GMBH.  
PATENT INFO: WO 2000060095 A2 20001012 97  
APPLICATION INFO: WO 2000-EP2701 20000328  
PRIORITY INFO: EP 1999-106656 19990401  
EP 1999-111321 19990610  
US 2000-180687 20000207

DOCUMENT TYPE: Patent  
LANGUAGE: English  
OTHER SOURCE: 2000-665012 [64]  
DESCRIPTION: Saccharomyces cerevisiae PDAT PCR primer #2.

L5 ANSWER 15 OF 34 DGENE COPYRIGHT 2006 The Thomson Corp on STN  
TI Phospholipid:diacylglycerol acyltransferase enzymes in the biosynthetic  
pathway for triacylglycerol production and DNAs  
encoding them, useful for producing triacylglycerol, or for  
transforming any cell or organism to increase oil content -  
AN AAC64450 DNA DGENE  
AB The present invention describes an enzyme for catalysing (in an  
acyl-CoA-independent reaction) the  
transfer of fatty acids from phospholipids to diacylglycerol in the  
biosynthetic pathway for the production of  
triacylglycerol (TAG). The enzyme is designated as  
phospholipid:diacylglycerol acyltransferase (PDAT). The enzyme  
and the nucleotides encoding them are useful for producing TAG and/or TAG  
with uncommon fatty acids. The enzyme and the nucleotide are  
also useful for transforming any cell or organism in order to be  
expressed in this cell or organism and result in an altered, preferably  
increased oil content of this cell or organism. The present sequence  
represents a PCR primer for yeast (Saccharomyces cerevisiae) PDAT.

ACCESSION NUMBER: AAC64450 DNA DGENE  
TITLE: Phospholipid:diacylglycerol acyltransferase enzymes in the  
biosynthetic pathway for triacylglycerol  
production and DNAs encoding them, useful for  
producing triacylglycerol, or for transforming any  
cell or organism to increase oil content -

INVENTOR: Dahlqvist A; Stahl U; Lenman M; Banas A; Ronne H; Stymne S

PATENT ASSIGNEE: (BADI) BASF PLANT SCI GMBH.

PATENT INFO: WO 2000060095 A2 20001012 97

APPLICATION INFO: WO 2000-EP2701 20000328

PRIORITY INFO: EP 1999-106656 19990401

EP 1999-111321 19990610

US 2000-180687 20000207

DOCUMENT TYPE: Patent

LANGUAGE: English

OTHER SOURCE: 2000-665012 [64]

DESCRIPTION: Saccharomyces cerevisiae PDAT PCR primer #1.

# Refine Search

## Search Results -

Terms	Documents
L4 and L3	1

Database:

US Pre-Grant Publication Full-Text Database

US Patents Full-Text Database

US OCR Full-Text Database

EPO Abstracts Database

JPO Abstracts Database

Derwent World Patents Index

IBM Technical Disclosure Bulletins

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## Search History

DATE: Monday, November 20, 2006

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result set

DB=USPT; PLUR=YES; OP=OR

<u>L5</u>	L4 and l3	1	<u>L5</u>
<u>L4</u>	dahlqvist.in.	23	<u>L4</u>
<u>L3</u>	L2 and (acyl-CoA independent)	27796	<u>L3</u>
<u>L2</u>	L1 and (enzyme)	91610	<u>L2</u>
<u>L1</u>	triacylglycerol production	819119	<u>L1</u>

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☐ 1. Document ID: US 6791008 B1

L5: Entry 1 of 1

File: USPT

Sep 14, 2004

US-PAT-NO: 6791008

DOCUMENT-IDENTIFIER: US 6791008 B1

TITLE: Use of a class of enzymes and their encoding genes to increase the oil content in transgenic organisms

DATE-ISSUED: September 14, 2004

## INVENTOR-INFORMATION:

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St.ang.hl; Ulf	Uppsala			SE
<u>Dahlgvist</u> ; Anders	Furulund			SE
Lenman; Marit	Lund			SE
Ronne; Hans	Uppsala			SE
Stymne; Sten	Svalov			SE

US-CL-CURRENT: 800/281; 435/224, 435/471, 435/483, 536/23.1, 536/23.2, 536/23.7, 800/278, 800/298, 800/306

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw Desc	Ima
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